

Azimuthal Processing

Existing datasets for Stress and Fracture

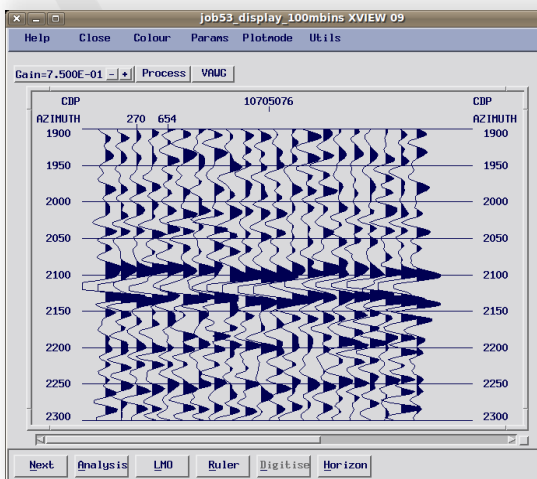
Did you know that conventional 3D datasets often contain sufficient azimuthal information to perform azimuthal processing? Environmental restrictions, exclusions and costs make new acquisition challenging or prohibitive. Using RPM™ re-processing costs less than 5% of acquisition, making azimuthal re-processing even more attractive.

RPM™ means speed – cheaper and faster than Kirchhoff

Our rapid processing protocol (RPM™) uses an alternative implementation of Kirchhoff at its core. We migrate each 3D volume fully in each azimuthal sector. RPM™ does not require regularly binned data, and works well with sparse and irregularly sampled data. The speed and these advantages allow us to perform azimuthal processing where previously thought impossible.

AusGeos - Complete Azimuthal Solution

Our azimuthal processing technology has been presented at the ASEG. AusGeos proprietary workflows allow source receiver azimuths to be tracked, grouped into any number of sectors and migrated separately. This allows for the separation and preservation of azimuthal information including amplitudes and velocities. These are extracted and used to provide stress and fracture information to the client.



Note variation in TWT and amplitude

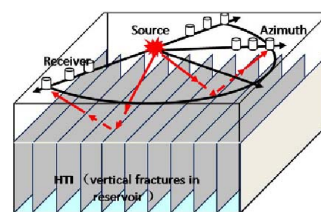


Figure 1. Vertical fractures in reservoir and 3D seismic azimuthal data acquisition

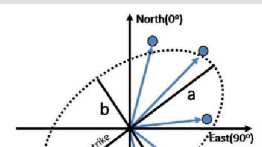


Figure 2. Fracture ellipse fitting

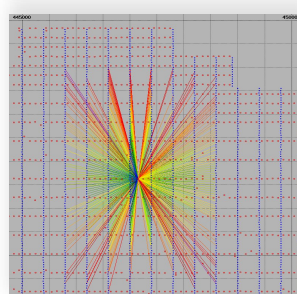


Figure 3. Azimuthal distribution in conventional 3D

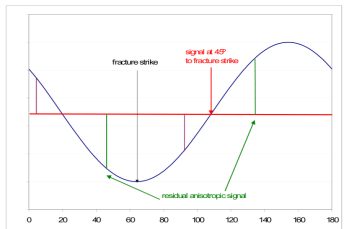


Figure 4: Elliptical variation (blue) of anisotropic attributes; the red line indicates the 45° response calculated in the first pass of the decomposition; orthogonal residuals contain the same amount of anisotropic signal but with opposite sign.